REMARKS/ARGUMENTS

Claims 2-6 and 20-23 are pending herein. Claim 21 has been amended as supported by page 26, lines 16-24 of the specification, for example. Claims 2, 3 and 22 have been amended in light of the amendments made to claim 21.

Examiner Chevalier is thanked for courtesies extended to Applicants' undersigned representative during a telephonic interview on July 19, 2007. The substance of that interview has been incorporated into the following remarks.

During the interview, Examiner Chevalier agreed that the amendments to the claims submitted above overcome the rejections under §112, second paragraph. Further, Examiner Chevalier tentatively agreed that Applicants' amendments to claim 21, along with the arguments submitted below, overcome the prior art rejections of record.

1. Claims 2-6 and 20-23 were rejected under §112, second paragraph. To the extent that this rejection might be applied against the amended claims, it is respectfully traversed.

With regard to the term "polarization-maintaining fibers," Examiner Chevalier is respectfully requested to note that the claims have been amended to clarify that the polarization-maintaining (P/M) fibers are optical fibers.

Examiner Chevalier is respectfully requested to note that claim 21 has been amended to clarify that the cured ribbon portion has a length of 2 to 300 mm **and** surrounds at least some of the P/M fibers.

With regard to the phrase "can be," Examiner Chevalier is respectfully requested to note the following. During assembly and use of the P/M fibers, it has been found that excess length of the ribbon must sometimes be removed for the purposes of assembly or reworking of the assembly (specification, page 16, lines 9-

12). For example, if an individual P/M fiber is broken or damaged during assembly with a device or another P/M fiber, the damaged fiber must be trimmed to expose an undamaged end portion and, a portion of the ribbon must be removed so that all of the fibers extending from the ribbon can be trimmed to the same length as the previously damaged fiber. In the case of the present invention, the ribbon coating in the end portion can be removed with a hot stripper without damaging the end portions of the P/M fibers, and the end faces of the P/M fibers are cut with a traditional fiber cutter (specification, page 19, lines 11-19). In summary, an important portion of the claimed present invention is that the external exposed surface of the ribbon portion is made of a structure that can be or, in other words, is capable of being stripped to expose the P/M fibers without damaging the P/M fibers.

In light of the foregoing, Applicants respectfully submit that all of the pending claims are clear and definite. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

2. Claims 2-6 and 20-23 were rejected under §103(a) over Mills, Pleibel, Logan and Cooke. To the extent that this rejection can be applied against the amended claims, it is respectfully traversed.

Amended claim 21 recites a ribboned P/M fiber comprising a plurality of P/M optical fibers and a cured ribbon portion. The cured ribbon portion has first and second lateral ends, has a length of 2 to 300 mm, and surrounds at least some of the P/M fibers. The P/M fibers extend individually from the second lateral end of the ribbon portion. Each of the P/M fibers are rotated to a predetermined plane of polarization before the ribbon portion is cured. At least an external exposed surface of the ribbon portion comprises a material that can be stripped to expose the P/M fibers without damaging the P/M fibers.

Examiner Chevalier is respectfully requested to note that the claimed ribboned P/M fiber can be handled in the same manner as in the case of an ordinary optical fiber ribbon (specification, page 12, lines 9-12). However, due to an important aspect of a P/M fiber, the individual P/M fibers must be rotated to a predetermined plane of polarization at an end face of the P/M fiber in order for the P/M fiber to mate with another P/M fiber or functional device (specification, page 26, lines 16-24). Because it has been found that the plane of polarization can change if (1) the pitch between the P/M fibers is shortened, (2) the coatings of the P/M fibers come in contact with one other and/or (3) adjacent P/M fibers are rotationally adjusted, a subsequent rotational alignment must be accomplished (specification, page 2, line 25 -- page 3, line 4). Accordingly, merely encapsulating P/M fibers into a ribbon that extends along the entire length of the P/M fibers will not allow for a subsequent rotational alignment or realignment of the individual P/M fibers as is required during the installation of an optical fiber system using P/M fibers.

Further, Examiner Chevalier is respectfully requested to note that the claimed invention allows for the individual P/M fibers to be rotated in relation to one another and secured in a desired rotational alignment through the use of a cured ribbon portion having a length of 2 mm to 300 mm. The inventors have found that the ribbon portion should be at least 2 mm in length to provide sufficient rotational strength to hold the individual P/M fibers in position (specification, page 16, lines 2-8). Further, the inventors have determined that the amount of rotation can be precisely adjusted only over a length of about 300 mm due to torsion created in one P/M fiber caused by the contact of coatings between adjacent P/M fibers (specification, page 16, lines 13-23). Accordingly, it has been determined that the cured ribbon portion must have a length of 2 mm to 300 mm.

Mills discloses, in column 1, lines 7-10, that a typical optical fiber ribbon includes a plurality of individually coated optical fibers disposed side-by-side in a common plane. Mills discloses, in column 1, lines 15-20, that optical fiber ribbons are primarily used in telecommunication cables so that connections can be accomplished through mass splicing of all the individual optical fibers in the ribbon in one operation. Mills discloses, in column 4, lines 17-30, that the ribbon coating is commonly applied to all of the optical fibers in an extrusion process along the length of the optical fibers. In light of these disclosures, it is readily apparent that the optical fibers are present within a ribbon formed along the entire length of the optical fibers during manufacturing such that the individual optical fibers cannot be rotated in relation to one another over their entire length. Therefore, Mills fails to disclose or suggest that P/M optical fibers could be used in the disclosed ribbon and Mills fails to disclose or suggest that the ribbon portion is to be of a length of 2 mm to 300 mm, as claimed.

Pleibel fails to overcome the deficiencies of Mills. Pleibel merely discloses, in the Abstract, a method of making a P/M optical fiber. Pleibel does not disclose or suggest that individual P/M fibers must be rotationally aligned to a predetermined plane of polarization with respect to adjoining P/M fibers. Further, installing the P/M fibers of Pleibel into the ribbon of Mills in place of the optical fibers of Mills would have resulted in a ribbon that extends the entire length of the P/M fibers such that the individual P/M fibers would be rotationally fixed in relation to one another over their entire length. Because there is no disclosure or suggestion of a rotational requirement for each P/M fiber of Pleibel (especially in a ribbon according to Mills), it would not have been obvious to one skilled in the art to make a ribbon portion having a length of 2 mm to 300 mm and rotating each of the P/M fibers in relation to one another before the ribbon portion is cured.

Examiner Chevalier's use of Logan and Cooke for alleged disclosure of varying lengths of ribbons fails to overcome the deficiencies of Mills and Pleibel. With regard to Logan, Examiner Chevalier is respectfully requested to note that the alleged ribbon groups 22, 42, 52 all extend for the entire length of the optical fibers contained therein. A recited range of 200 mm to about 500 mm in column 5, lines 9-11 relates specifically to a lay length as a unit of measure or helical twist of one ribbon group about another ribbon group. There is no disclosure or suggestion within Logan of including P/M fibers in the ribbon groups 22, 42, 52, and there is no disclosure or suggestion within Logan of a cured ribbon portion having a length of 2 to 300 mm. Therefore, Logan fails to overcome the deficiencies of Mills and Pleibel.

Cooke discloses, in Figs. 1 and 2, and in column 3, lines 3-14, the presence of an optical ribbon 50, which comprises two or more optical fibers 12 having one or more individual coatings thereon within a common coating 11 of material. It is clear from Figs. 1 and 2 of Cooke that the common coating 11 forming the ribbon of optical fibers 50 extends the entire length of the optical fibers. Examiner Chevalier is respectfully requested to note that the flexible casing 14 is not a ribbon as defined. Accordingly, there is no disclosure or suggestion within Cooke of including P/M fibers in the ribbon 50, and there is no disclosure or suggestion within Cooke of a cured ribbon portion having a length of 2 to 300 mm. Therefore, Cooke fails to overcome the deficiencies of Mills and Pleibel.

In light of the foregoing, Applicants respectfully submit that a cured ribbon portion having a length of 2 to 300 mm wherein each of a plurality of P/M optical fibers are rotated to a predetermined plane of polarization before the ribbon portion is cured, as recited in claim 21, would not have been obvious to one skilled in the art provided with the disclosures of Mills, Pleibel, Logan and Cooke. Since claims 2-6, 20, 22, and 23 depend either directly or indirectly from claim 21, those claims are also

believed to be allowable over the applied prior art. Accordingly, reconsideration and withdrawal of the present rejection are respectfully requested.

For at least the foregoing reasons, Applicants respectfully submit that all pending claims herein define patentable subject matter over the art of record. Accordingly, the PTO is requested to issue a Notice of Allowance for this application in due course.

If Examiner Chevalier believes that further contact with Applicants' attorney would be advantageous toward the disposition of this case, she is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

July 23, 2007
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